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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,858	08/19/2003	Michael Chi-Wang Chan	V9661.0040/P040	6308

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EXAMINER
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PASTERCZYK, JAMES W

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 05/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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## Office Action Summary

Application No.

10/643,858

Applicant(s)

CHAN ET AL.

Examiner

J. Pasterczyk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 8-21 and 24-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 7, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5 and 12-21, drawn to transition metal compounds, classified in class 556, subclass various depending on the transition metal inter alia.
- II. Claims 6, 7, 22 and 23, drawn to catalysts with activators, classified in class 502, subclass 102 inter alia depending on the identity of the metal and the cocatalyst.
- III. Claims 8-11 and 24-27, drawn to olefin polymerization methods, classified in class 526, subclass various depending on the cocatalyst used.

2. The inventions are distinct, each from the other because:

Inventions I and II are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a pigment for UV-visible light filters, and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different

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inventions have different functions, the former to filter UV or visible light, the latter to provide a structural plastic material.

Inventions II and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product as claimed can be practiced with another materially different product, such as a Ziegler-Natta or metallocene catalyst.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Hua Gao, Esq., on 4/19/05, a provisional election was made without traverse to prosecute the invention of group II, claims 6, 7, 22 and 23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-5, 8-21, and 24-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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6. The abstract of the disclosure is objected to because it lacks details of the second transition metal compound, i.e. that of claim 12, as well as that the claims as now restricted are drawn to an olefin polymerization catalyst using said transition metal compounds and olefin polymerization processes using these catalysts. Correction is required. See MPEP § 608.01(b).

7. As a result of the above restriction requirement and the fact that the compound claims are not rejoinable with the remaining claims, the limitations of the compound claims should be brought into the dependent claims. As a result, the following rejections apply to the elected claims via the independent claims from which they depend.

8. Claims 6, 7, 22 and 23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the transition metals being from Group 4, does not reasonably provide enablement for the metals being from any other group of the periodic table. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Chemistry is an unpredictable art and catalysis even more so. The specification only discloses actual working examples of the transition metal compounds having group 4 metal atoms. The chemistry of other metals, particularly late transition metals and lanthanides, is quite different from that of group 4 alone, hence it is not clear that one wishing to practice the present invention would be enabled to do so without undue experimentation to discover how to make, let alone use in a catalyst, the metal compounds covered by the presently overbroad claims.

9. Claims 6, 7, 22 and 23 are objected to because of the following informalities: in claim 1 from which claims 6 and 7 depend, fifth line after the structure, insert --a-- before "cyclic

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group”, and in the penultimate line insert --a-- before “neutral”. In claim 12, second line after the structure, insert --are-- before “each independently”, and in the penultimate line insert --a-- before “neutral ligand”. Appropriate correction is required.

10. Claims 6 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 1 from which these claims depend, T is recited as being an optionally substituted methylene group. However, in the specification, the only working examples given are of T being a phenylene group. The chemistry of these two groups is considered to be sufficiently different that one of ordinary skill in the art would not have been enabled to practice the claimed invention without undue experimentation since chemistry is an unpredictable art.

11. Claims 6, 7, 22 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 12 from which these depend, l. 4 after the structure in each, change “may be” to --is-- for definiteness.

In claims 7 and 23, third line from the end in each, “tetrakis(pentafluorophenyl)borate” is only an anion; no corresponding counter cation is recited.

12. The following is a statement of reasons for the indication of allowable subject matter: none of the prior record discloses a transition metal compound used in an olefin polymerization catalyst that lacks the second E group bonded to the transition metal atom.

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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is 571-272-1375. The examiner can normally be reached on M-F from 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

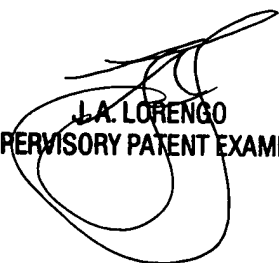
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. Pasterczyk

4/29/05

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J.A. LORENGO  
SUPERVISORY PATENT EXAMINER